

A NEW SPECIES OF *MEDINILLA* (MELASTOMATACEAE) FROM ANAMALAI HILLS, SOUTH INDIA

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ABSTRACT

An undescribed species of the genus *Medinilla* Gaud., from the Anamalai Hills, South India, is described and illustrated.

RESUMEN

Una especie no descrita del género *Medinilla* Gaud., de Anamalai Hills, sur de India, se describe y se ilustra.

INTRODUCTION

Medinilla Gaud., an Afro-asiatic genus is estimated to have 430 species (Veldkamp pers. comm.). The genus has a bicentric distribution pattern due to the movement of landmasses during the late Cretaceous period from a Gondwanian origin (Nayar 1972). In Asia, the distribution ranges from Indian-Himalaya southwards to Sri Lanka, Myanmar, Thailand, Cambodia, Vietnam, Malay Peninsula eastward through the islands of the Malay Archipelago, New Guinea down to Northern Australia, and is adapted to warm humid paleotropical climate. More than 300 species are reported from the Indo-Malaysian region (Nayar 1966). Malayan regions and Madagascar are the principal centers of diversity and endemism- Philippines: 80 species, Madagascar: 70 species, Borneo: 48 species (Perrier 1951; Regalado 1990, 1995). Nayar (1972) has analyzed the distribution pattern of Asiatic Melastomataceae and recognized four centers. The Western Ghats is included in the Deccan-Ceylon center (Peninsular India and Sri Lanka) of species formation. Among the 9 Indo-Sri Lankan species, 5 are reported from Peninsular India and Sri Lanka and others are confined to the subtropical Himalayas and Assam hills. *Medinilla beddomei* Clarke and *M. malabarica* Bedd. are exclusive to Southern Western Ghats and the third species, *M. fuchsioides* Gard., formerly considered endemic to Sri Lanka, was recently reported from Southern Western Ghats (Shetty & Karthikeyan 1976).

During explorations in the windward region of Southern Western Ghats, interesting specimens of *Medinilla* were collected from three localities of Anamalai Hills. The specimens did not agree with the species known from India and Sri Lanka. Further study with literature on *Medinilla* (Bremer 1987; Perrier 1951; Regalado 1990, 1995) shows that the specimens have more affinity to Indo-Sri Lankan

species and is allied to *Medinilla malabarica* Bedd. The specimens were further compared with the collections from Indo-Malaysia in the Kew Herbarium and no matches were found. It is described and illustrated here as a new species.

Medinilla anamalaiana Sasidharan & Sujanapal, sp. nov. (**Fig. 1**). TYPE: INDIA. KERALA: Palakkad District, Parambikulam Wildlife Sanctuary, Shekkal mudi 1200 m, 1 May 1999, *P. Sujanapal* 19431 (HOLOTYPE: MH; ISOTYPES: CALI, KFRI, L).

Medinilla anamalaiana *M. malabaricae* affinis in habitu omnium foliorum innovatorumque rufo-brunneorum, sed surculis succulentis (sub)quadrangularibus, foliis membranaceis 3-costatis, apice obtuse acuminato, inflorescentiis axillaribus vel e axillis defoliatis in seriebus horizontalibus, floribus breve pedicellatis gerentibus distinguendum. In *M. malabarica* rami annotini teretes indurati folia crasse coriacea 5-costata, apice acuto vel obtuso, flores in cymis pedunculatis gerentes.

Epiphytic subshrubs; branches fleshy, acutely quadrangular or subquadrangular, sparingly branched, sometimes rooting from lower nodes, smooth, on drying forms a winged appearance; stem 20–35 cm long, young shoots reddish-brown. Leaves membranous, opposite pairs unequal, sometimes equal, larger one 7–11.5 × 3–5 cm, smaller 4–6 × 2.5–3.5 cm, elliptic-oblong, base subcordate or obtuse, apex obtusely acuminate, acumen sometimes twisted, margin entire, 3-nerved, lateral ribs near the margins, faint towards apex; petiole 2–4 mm, flattened, glabrous. Flowers 4-merous, 2–5 in axils or from leafless nodes in horizontal row, sometimes 2 or 3 on a short stalk (1–2 mm); pedicel with 2 minute bracteoles at base, jointed, 2 mm at anthesis, elongating to 4 mm in fruit; hypanthium obovate, subquadrangular, 3 mm across, thinly puberulous, shortly narrowed at mouth with 8 minute teeth; petals 5–7 × 4 mm, rose-pink, obliquely obovate, minutely apiculate; stamens 8, filaments 3 mm long; anthers 2 mm long; ovary 1.5 mm across, obovoid, 4-celled, connected to hypanthium with 8 membranous appendages; style to 7 mm long; stigma minutely capitate, papillate. Berries 4 mm across, globose, glabrous; crowned by a small hypanthial limb; seeds many, yellowish-brown, 1.5 × 1 mm, smooth, ovoid, concave on the side of raphe.

Medinilla anamalaiana is allied to *M. malabarica* Bedd. in the general appearance of the leaves and reddish-brown tender shoots. However, it can be distinguished from the latter by the succulent quadrangular or subquadrangular branches, 3-nerved membranous leaves with obtusely acuminate apex and short pedicelled flowers in axils or from leafless nodes in horizontal rows. *Medinilla malabarica* Bedd. has terete woody branches, 5-nerved thickly coriaceous leaves with acute or obtuse apex and flowers in pedunculate cymes.

Note.—The floral structure of *Medinilla* appears to be uniformly similar in most of the species and is not much diagnostic value. Because of the high rate of endemism in *Medinilla* most of the workers followed geographic distribution in addition to morphological or vegetative characters in their regional revisions or floristic works. Our taxonomic concept for describing *M. anamalaiana* also follows the same approach in addition to morphological characters.

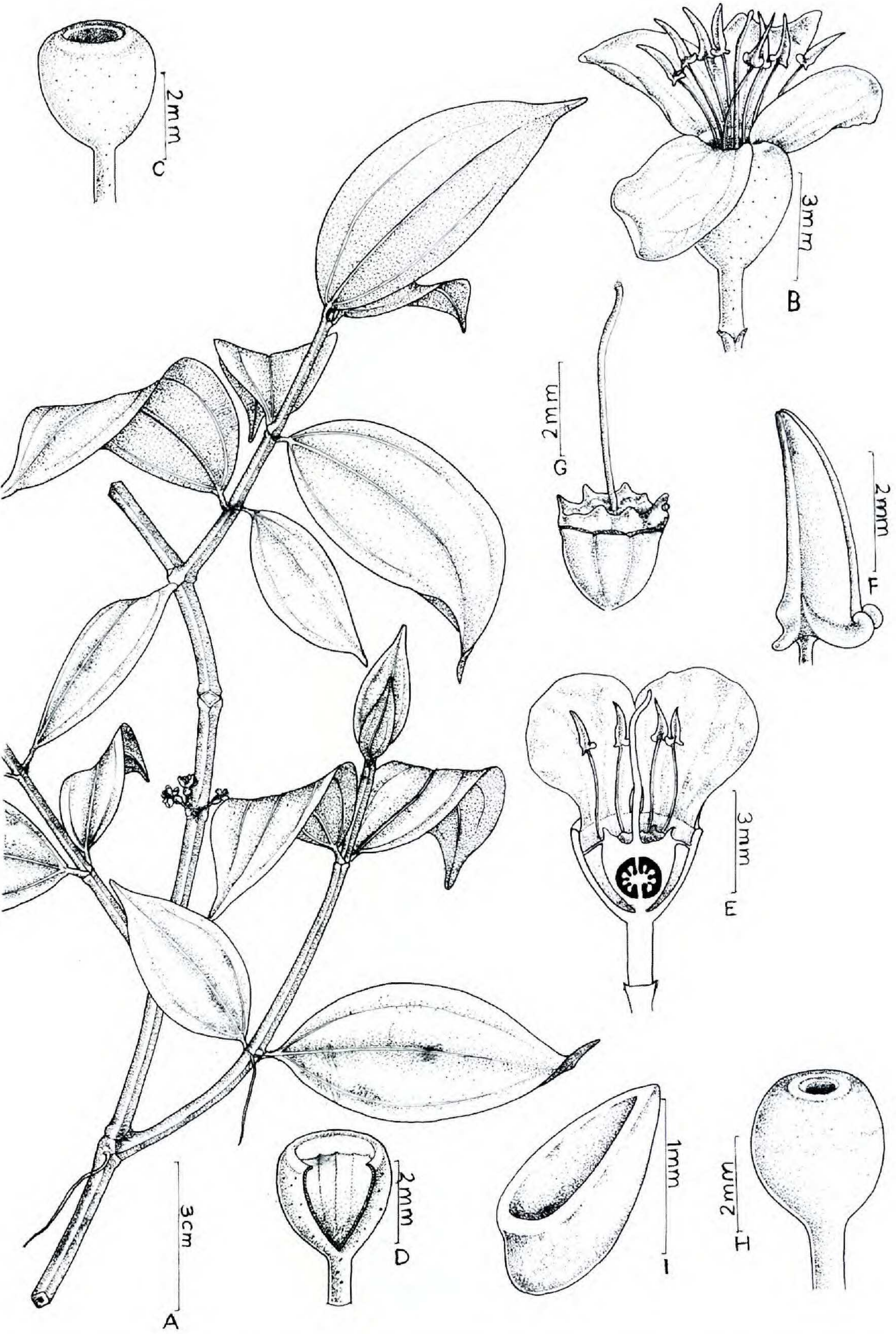


FIG. 1. *Medinilla anamalaiana* Sasidharan & Sujanapal. A. flowering twig; B. flower; C. hypanthium; D. hypanthium cut open; E. flower L.S; F. anther; G. pistil; H. fruit; I. Seed.

Flowering and Fruiting.—January–June.

Etymology.—The specific epithet of the new species is derived after its type locality, the Anamalai hills.

Distribution and Status.—The species is so far restricted to the evergreen forests, with an altitude ranges from 400–1300 m in the windward side of Anamalai hills.

Habitat and Ecology.—An epiphyte in the crevices of trees in the middle stratum of evergreen forests. This species is often found associated with epiphytes like *Aeschynanthus perrottetii* A. DC. Common tree associates are *Gymnanthemum arborea* (Buch.-Ham.) H. Rob, *Elaeocarpus glandulosus* Wall. ex Merr., *Turpinia malabarica* Gamble, *Drypetes wightii* (Hook. f.) Pax & Hoffm., *Palaquium ellipticum* (Dalz.) Baill., *Calophyllum polyanthum* Wall. ex Choisy, *Mesua thwaitesii* Planch. & Triana, etc.

PARATYPES: **INDIA. Kerala. Palakkad District:** Parambikulam Wildlife Sanctuary, Puliya 1000 m, 3 Apr 2000, P Sujanapal 30043 (KFRI). **Pathanamthitta District:** Goodrical Range, Moozhiyar 500 m, 23 May 1984, N Sasidharan 3142 (KFRI). **Idukki District:** Periyar Tiger Reserve, Vallakkadavu 900 m, 3 Jun 1995, Jomy Augustine & KP Rajesh 15429 (KFRI).

KEY TO SOUTH INDIAN SPECIES OF *MEDINILLA*

1. Flowers in horizontal rows or on 1–2 mm long peduncle; petals 5–7 × 4 mm

 M. anamalaiana
1. Flowers in pedunculate cymes; peduncle 5–12 mm long; petals 10–14 × 8–10 mm.
 2. Leaves orbicular, fleshy; branchlets 2–3 mm thick, climbing

 M. beddomei
 2. Leaves elliptic or elliptic-oblong, subcoriaceous; branchlets more than 5 mm thick, not climbing, clump forming.
 3. Petiole 4–7 mm long; lateral nerves arises from the base of the lamina

 M. malabarica
 3. Leaves sessile or subsessile; lateral nerves arises ca. 2 mm above the base of the lamina

 M. fuchsioides

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